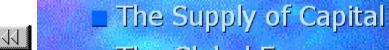


Slide 1 of 24

The usual disclaimers apply to this briefing. The views you will hear are mine and represent no official US Government position.

Outline





- Risk premia and lending maturities as a means to "take the temperature" of the system
- Transitions To Watch In The Next Decade
 - The US Fiscal Position
 - Spread of the Anglo-Saxon Model
- Practical Suggestions

28 September 1999

41 st Annual NABE Meeting

Slide 2 of 24

Notes:

Understandably, the other speakers have focused on country considerations in this session on "Country and Political Risk: What is the Right Framework?" My focus will be not on borrowers and their vulnerabilities, but on the supply of capital to the 32 or so Emerging Market Countries that typically are our target of analysis.

First, I'll discuss some "stylized facts" about the supply of capital, concentrating on five-six key facts that we should all know but sometimes lose sight of. Forgive me if these seem obvious, but supply considerations are ignored with amazing frequency.

Then I will discuss the need for those of us in the risk assessment business to think about the global economy as an integrated complex system with its own vitality. This is essential if we are to assemble the pieces right.

Then I'll talk about two large scale transitions that may be ahead of us in the next decade or so that may change the way we think about all of these issues. Finally, I will share several practical suggestions for doing risk assessment better.









Supply and Country Risk

- Risk assessment frameworks that focus exclusively on country issues will either overstate or understate risk
 - They will thus over-predict or under-predict crises
- The triggers for financial crises are usually supply side phenomena

28 September 1999

41 st Annual NABE Meeting

Ð

Slide 3 of 24

Notes:

We have all heard about country risk assessment models that over-predicted or under-predicted financial crises--because they overstate or understate risk. Our models end up suffering from this flaw for a variety of reasons--many of them emanating from the supply side of the global credit market.

It ought to be obvious that the aggregate allocation of capital among any given class of assets is highly variable. I'll illustrate this variability in a few slides. Neglecting this fact is a good way to misspecify the risk implied in even the most elaborate country ranking schemes.

Beyond this, different groups of countries are indebted to different national banking systems, different classes of direct investors, and to different types of equity and fixed income portfolios. Shocks emanating from one national source are bound to be propagated among emerging markets in different order and with different severity than shocks from another national source--a problem not remedied and probably even obscured by any aggregated ranking we might work with, say one that ranks emerging markets by the ratio of short-term liabilities to liquid assets.

And in fact, given the array of debts among emerging market borrowers, financial crises of consequence are usually triggered on the supply side.









Why Focus on Supply?

Recent Triggers









- In the 1994-95 Mexico crisis, the supply shock was a hike in the US Federal Funds rate
- In the 1997-98 Asian crisis, the supply shock was an increase in short-term yields in Europe and Japan and consolidation in Japan's banking system

28 September 1999

41 st Annual NABE Meeting

Slide 4 of 24

Notes:

Consider the last two large scale crises: Mexico during 1994-95 and the crisis that began in East Asia in 1997 and reverberated globally during 1998. The Mexico crisis was clearly triggered by the increase in the US Federal Funds rate in 1994. This isn't to absolve Mexico, it is just to acknowledge, using a crisis with which we are all familiar, that the price and availability of capital is potentially the largest source of shocks to a financially vulnerable emerging market--and ignoring such a source of volatility is a serious shortcoming. In the case of East Asia, we all know by now that Thailand, Korea, and Indonesia were beholden in some critical sense to banks in Japan and the EU, whatever their debts to other creditors. And in the spring of 1997, when the yield curves in Japan and the EU changed substantially, as the price of domestic short-term credit rose., the crisis was off and running.

I know of exactly one analyst who had Asia more or less figured out by March of 1997, and while his initial focus was on the exposure of Thailand, Korea, Indonesia, and other Asian states to BIS and offshore banks, his real concern ultimately was Japan's financial system and the disinclination of its member banks to maintain their Asian exposure.

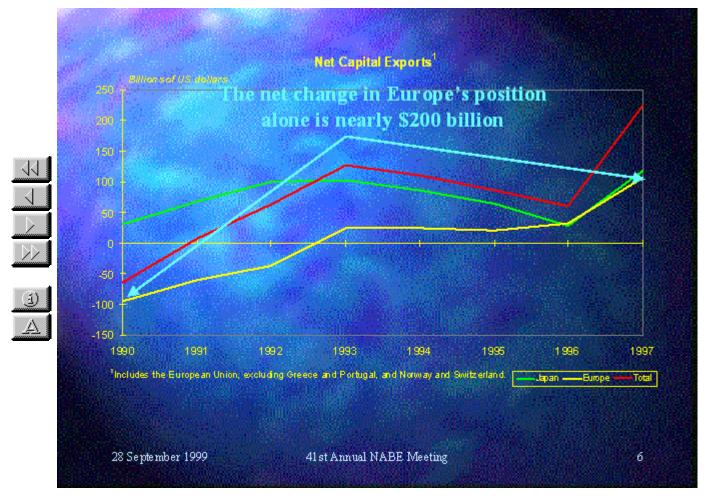
Slide 5 of 24

Acknowledging that shocks emanate from the supply side, how should we factor supply considerations into our risk analysis? First, some stylized facts to keep in mind.

There is a collection of countries that chronically contributes a large amount of capital to global markets--Japan, the EU, Taiwan, Singapore, and a handful of others. This volume of funds is, in principle, available to the emerging markets, and it is of course also available to industrial countries.

In 1995-96, the net flow capital to 32 emerging market countries was averaging abut \$220 billion or so and was expected to rise beyond this level in 1997--an outcome the Asian crisis was to change. Japan, the EU, Taiwan, and Singapore were running current account surpluses exceeding \$200 billion when the crisis hit in June.

While the supply of net capital to the emerging markets is highly unstable, the cumulative total of these (mostly industrial country) current account surpluses is less erratic.



Slide 6 of 24

We tend to under appreciate northern Europe as a capital exporter relative to Japan. But the shift in Europe's annual net position since 1990 is almost \$200 billion, not so different from the growth in the emerging market's net position as an importer.

Slide 7 of 24

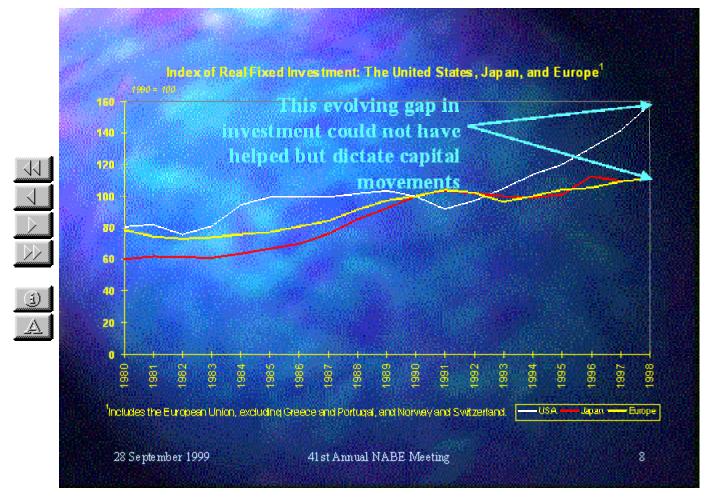
41 st Annual NABE Meeting

28 September 1999

Notes:

The reason this supply of capital is relatively stable is that it reflects weak domestic investment relative to savings in these countries. As you might suspect, since savings, and especially private savings, is relatively stable, the source of net capital flows from these countries is a product of a lack of investment opportunities.

In Japan and the EU, and certainly for Taiwan, the reason investment lags is structural, or microeconomic. Europe and Japan suffer weak investment demand because of regulatory environments, labor laws and institutions, high tax burdens, and the like.



Slide 8 of 24

The EU makes the case especially convincingly, since European companies have in the 1990s been quite profitable by historic standards, but domestic investment nonetheless has been extremely weak.

Slide 9 of 24

Anticipating what will be available to emerging markets from the chronic surplus economies requires understanding the role of the United States as a capital importer. This, too, is a structural issue, as the resurgence of investment demand in the United States since 1991 or so shows.

The United States also plays the critical role of issuer of the world's "benchmark asset"--that is, the world's primary risk free asset, US Treasury securities. In reflection of the US fiscal position, the United States flooded the world with new net debt between 1982 and 1997 to the extent that the public's holding of Federal debt doubled as a share of GNP--from one-fourth to one half; since 1997, foreign purchases of US corporate bonds have outpaced Treasuries. The flood of benchmark assets competed for capital against higher yield emerging market assets during this period. But the flood also, over the longer run, increased the appeal of holding the riskier emerging market assets by providing considerable risk free ballast to portfolios. This prospective balancing act can be quickly undone, of course, by "flight to quality" when assessments of risk change sharply, as they did a year ago at this time.

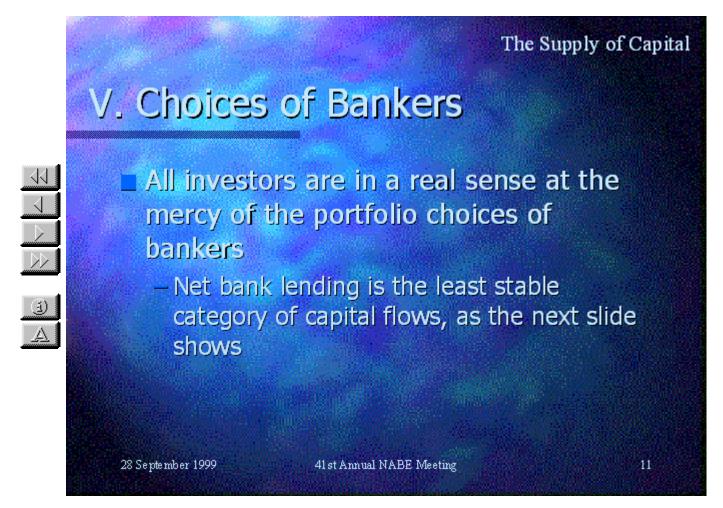


Slide 10 of 24

Notes:

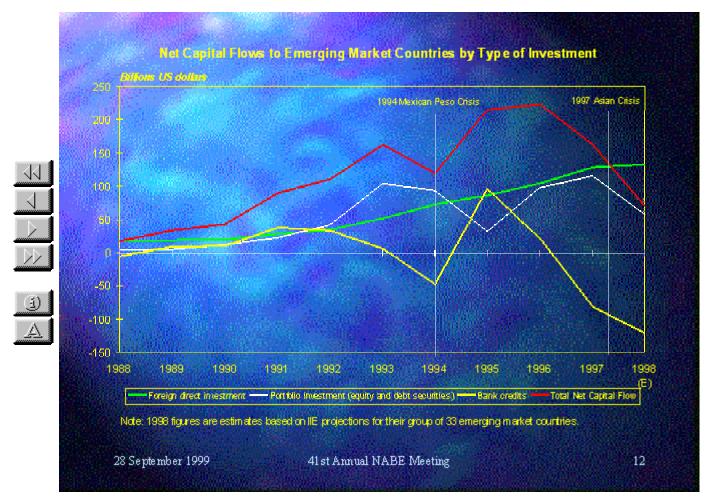
The emerging markets end up bidding for a trickle of global capital flows. It is surprising how little capital actually ends up in the developing countries, given the presumably higher returns available there.

The issue for country risk analysis is as much about how stable a trickle this turns out to be as it is about ranking countries in relative terms.



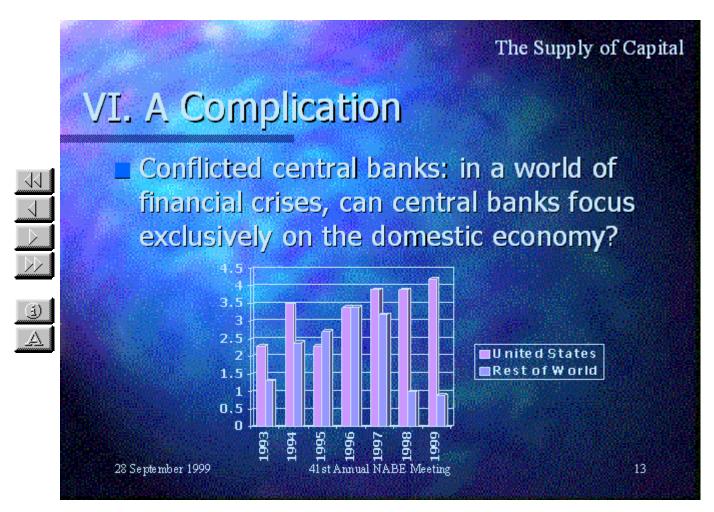
Slide 11 of 24

If we concentrate on the flows that make their way to the emerging markets, it is bank credit that makes up the most volatile component of the flow. But in a country risk and balance of payments sense, all investors--foreign direct investors, equity and fixed income investors, and official creditors, are in it together.



Slide 12 of 24

This chart illustrates why we have to focus on bank credit, especially short term bank credit, to do risk analysis. But this also implies that we need to focus on the banking systems that issue these credits if we are to assess risk accurately. What is happening at home that makes this supply of credit so erratic?



Slide 13 of 24

A final issue is the dilemma faced by the Federal Reserve in managing US interest rates and thus directly altering the flow of capital to the emerging markets.

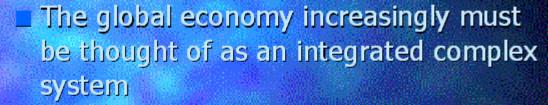
The Fed can remain focused on domestic US considerations when external conditions are orderly; the ECB or the Bank of Japan end up going along as often as not.

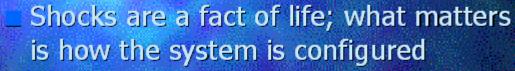
When credit conditions get truly disorderly, as they did a year ago, for the Fed to focus exclusively on the ordinary mission imposes a cost. The Tinbergen principle tells us that any government needs a policy instrument for each policy objective it has in its portfolio, and so a domestic focus precludes managing external conditions; similarly, managing external stability would entail giving up the domestic objective.

The graph depicts the remarkable disjoint in US and Rest of World growth since the onset of the Asian crisis. Is a modern day circumstance that the Fed has to switch objectives as external crises intensify, and if so, how do we build this switching into risk analysis?

The Global Economy

Putting The Pieces Together





 The sand pile metaphor: identical shocks can have wildly different impacts

28 September 1999

41 st Annual NABE Meeting

14

Slide 14 of 24

Notes:

What is most challenging for the risk assessment business is the obvious need in a complex and integrating global economy to understand how all the pieces fit. This is a new art, since not many of us are trained to formally do this. It requires a knowledge of trade and finance, for example, that is more than rudimentary, as well as an ability to integrate institutional and political perspectives.

The "Renaissance Risk Analyst" would also be versed in systems and game theory. One useful idea from this constellation of ideas is the notion that the ultimate effect of the shocks we must steel ourselves to expect in a global economy depends on positions accumulated by market participants, that is, by suppliers of capital. The sand pile metaphor relates the size of the avalanches unleashed by additional grains of sand to the configuration of the sand pile itself.

Two measures of the criticality of the financial "sand pile" that I can think of are, first, the recent historic record of risk premia on emerging market debt and, second, the maturity of claims by industrial country banks on emerging market lenders.







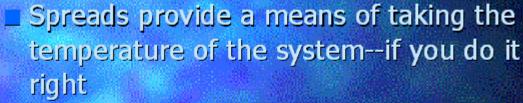












What does it mean when suppliers of capital, for several years, have "underpriced" risk? That the eventual avalanche will be a big one?

28 September 1999

Risk Premia

41 st Annual NABE Meeting

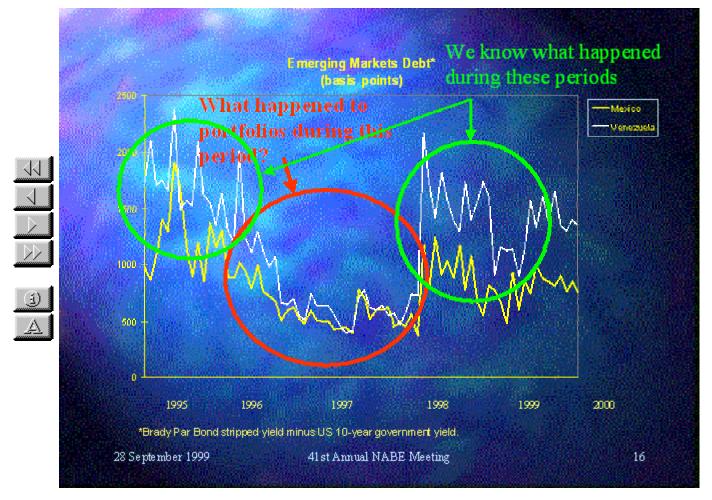
15

Slide 15 of 24

Notes:

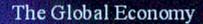
We all spend time looking at spreads over comparable US Treasuries to see how market participants are valuing risk. Spreads are available on Brady Bonds, Euro Bonds, and of course n domestic instruments, such as junk bonds or mortgage securities. Spreads can also be had on instruments like interest rate swaps, where a financial intermediary is creating a deal in which a strong credit risk is compensated for providing an interest rate option for a weaker credit risk. What is interesting is that so many spreads seem loosely correlated over time, not just in the short-term, when market participants speak of "contagion," but over longer periods.

What is also striking is the periods in which risk seems to decline sharply, leaving suppliers of capital with portfolios of what will later prove to be underpriced risk..



Slide 16 of 24

We are all familiar with the spikes depicted in this graphic. Ed Yardeni does a nice job of pulling these together under the heading, "Flight to Quality" on his web site at yardeni.com. This slide depicts one of many such series. But how do we explain the inter-crisis, 1995-97, period? Drawing on the sand pile metaphor, the ultimate impact of a shock like the collapse of the baht will be greater the more risk suppliers of capital have added to their portfolios. The 1997-98 avalanche was in retrospect a big one for this reason, and the 1998 period especially had to be one in which asset holders aggressively rebalanced risk.



Another Means

By December 1996 East Asian borrowers owed the following share of their debts to BIS banks short-term:

– Indonesia	62 percent
– Malaysia	50 percent
 South Korea 	68 percent
– Thailand	65 percent
- Philippines	58 percent

This says something telling about the creditor banks in Japan and Europe

28 September 1999

41 st Annual NABE Meeting

17

Slide 17 of 24

Notes:

Another way to take the temperature of the global economy is to consider the maturity of bank lending to riskier clients like the emerging markets. By the end of 1996 Japanese banks, especially, had shortened maturities to their East Asian clients.

We all know this says something about Southeast Asia and Korea. But it says something as well about Japan. Was there any reason to think that this was sustainable, even if we concluded that Southeast Asia and Korea were not on unsound footing? This was another argument for a large avalanche. And it was monitorable.

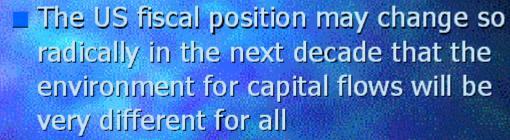






Transitions To Watch

The US Fiscal Position



- CBO projections peg the accumulated nominal surplus at \$ 3 trillion through 2009
- This sum compares to \$3.6 trillion in debt now held by the public

28 September 1999

41 st Annual NABE Meeting

18

Slide 18 of 24

Notes:

Looking ahead, there are two key transitions to watch that will bear heavily on the supply of capital available to emerging markets over the next decade. The first concerns the US fiscal position, which will in all likelihood substantially change the position of the United States as a capital importer. The second is the possible spread of US industrial restructuring values to Europe and Japan, which could sharply reduce the volume of capital being exported by Europe and Japan.

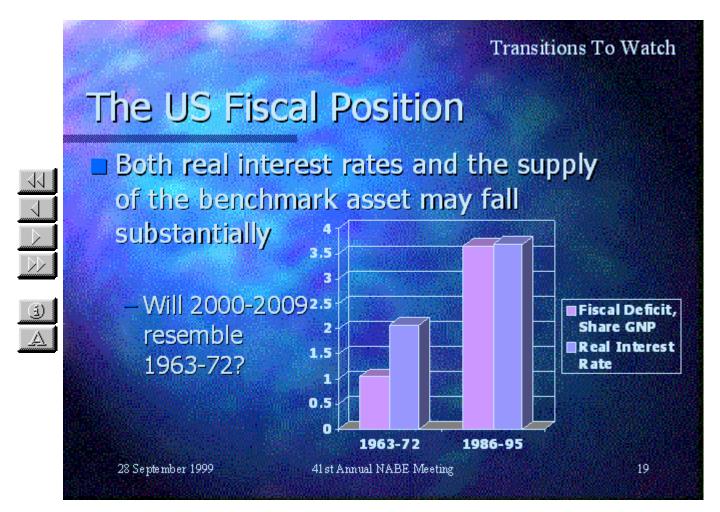
You have heard a lot about the US budget surplus and its out year prospects. Larry Summers six weeks ago suggested the policy course will be to use it to repurchase outstanding debt, which among other things would produce enormous interest savings. It is conceivable that the outstanding debt as a share of GNP will fall from about half currently to about six percent a decade from now. Tax cuts could change this forecast, but there does not seem to be a great public clamoring for such tax cuts, and in any case, the growth projections that underpin the tax revenues in the Congressional Budget Office forecast are fairly conservative.











Slide 19 of 24

The Institute of International Finance has pondered what all this means for the availability of capital and real interest rates globally. The IIF points out that real interest rates in a previous period of fiscal abundance in the United States--the 1963-72 period--were on average substantially lower than during the recent period of fiscal weakness--1986-1995. The difference is no less than 160 basis points.

Transitions To Watch

US Fiscal Position Impact









- Impact on emerging markets would be mixed
 - Lower benchmark cost of capital
 - But fewer no-risk benchmark assets to balance riskier assets in portfolios, which may mean far less appetite for emerging market assets

28 September 1999

41 st Annual NABE Meeting

20

Slide 20 of 24

Notes:

An equivalent reduction in interest rates for emerging markets during 1999-2009 would mean perhaps a one fifth reduction in borrowing costs and a vast reduction in repayment obligations on floating rate debt.

The broader portfolio effects are much harder to predict. Please recall that the 1986-95 period, during which the United States was issuing large volumes of debt and bidding up real interest rates, emerging market borrowers were also increasingly able to borrow capital, as shown in a previous slide.

This seems to suggest that as we look ahead a decade, emerging markets will get a break early, as real interest rates start to fall, and struggle later, as the supply of the benchmark asset begins to be depleted.

Remember what a splash emerging market debt has made in the 1990s, crises in Mexico and Asia notwithstanding. It isn't unthinkable that this will all be undone--and indeed made history--in the next decade or so.



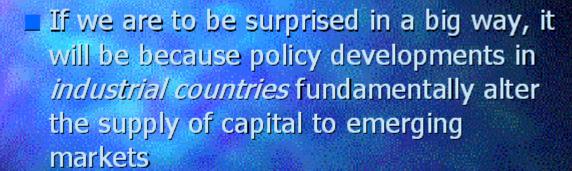
Slide 21 of 24

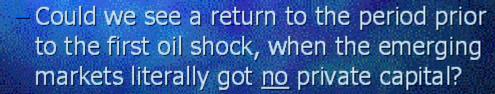
But a more serious blow to the emerging markets would be the revival of domestic investment in Europe and Japan, which would dry up capital exports. What could make this happen? A prime candidate would be a replay in Europe and Japan of the US investment boom since 1991, which many attribute to restructuring underway in the US since the early 1980s. This entails the spread of some hybrid of the Anglo-Saxon model: financial deregulation, innovation and "right sizing" in the nonfinancial corporate sector, and the increasing application of technology to financial transactions--what some call the "equity culture."

You can argue, but many people see this on the horizon in Japan and Europe. Financial economists, whose clients are increasingly making deals in Japan and Europe, are more bullish than macroeconomic forecasters.

Transitions To Watch

Plausible Outcomes





28 September 1999

41 st Annual NABE Meeting

22

Slide 22 of 24

Notes:

The worst case is one in which Japan and Europe revive investment and squelch capital outflows.

In any case, the point is made: ignoring supply considerations in favor of a focus on reforms in the emerging markets themselves is a hazardous way to do risk analysis.









Practical Suggestions

Tools To Use









- Maturity of lending by BIS banks to blocks of emerging market countries
- Structural reform and deregulation among the capital suppliers
- Spreads, foreign and domestic
- Later, spreads not linked to Treasuries
- The musings of globalists
- Systems dynamics, biological metaphors

28 September 1999

41 st Annual NABE Meeting

Slide 23 of 24

Notes:

Some practical suggestions.

First, now that the joint BIS-IMF-World Bank-OECD web site gives easy access to debt data, and since most of us are already monitoring borrowing countries, it is possible to aggregate data which is suggestive of the maturity of lending by the supplying banking systems, such as Japan.

Second, since we know what the sources of capital are, it is easy to monitor credit conditions, including long-term reforms that prompt adjustments by market participants, that ultimately alter the external balance of the industrial countries.

Spreads over Treasuries are something we all look at to anticipate changes in the pricing of risk. We should do his creatively--that is, with a longer term focus. What does the history of a given spread tell us about what people have in their portfolios? Does it lead us to expect a big or small adjustment by historic norms? And if the net supply of Treasuries continues to decline, might spreads on instruments like interest rate swaps tell us something valuable about how market participants distinguish between strong and weak credit risks, and thus whether they perceive system risk as big or small?

Practical Suggestions

References

- "World Economic Outlook," IMF, various, but especially May 1998 and May 1999
- "Monthly Economic Review," Institute of International Finance, especially August 1999
- —"Capital Flows to Emerging Market Countries," IIF, especially April 1999
- "Global Restructuring: Lessons, Myths, and Challenges," Stephen Roach, MSDW, June 1998
- "Profile and Forecast," Woody Brock, Strategic Economic Decisions, especially May 1998 and 1999
- "How Nature Works," Per Bak, Copernicus Books, 2ISBN-0387947914 September 1996

Slide 24 of 24

Notes:

Read the musings of global thinkers, like Stephen Roach of Morgan Stanley Dean Witter and Nariman Behravesh of DRI, who are each superb. Be an avid reader of the IMF outlook and capital markets series, and if you can afford a membership, the works of the Institute of International Finance. The point is that while you might focus primarily on emerging market country issues, part of your vision should be global, or you are going to get blind sided. Finally, a not so practical suggestion: cast your intellectual net widely, It's not like everyone understands the last two years perfectly. Woody Brock of Strategic Economic Decisions always has a novel take on things, including his use of the Mordecai Kurz Rational Beliefs construction, which reminds us why investors struggle in a nonstationary world. In this vein, but more adventurous, embrace evolutionary economics, complexity, and biological metaphors in analysis. Per Bak's book offers a good start. Robert Feldman of MSDW has tested the consistency of this approach with variations in the Nikkei 225 and the yen, finding that avalanches in these series exhibit such properties. Repeat after me: "Self-organized Criticality."







